

REMARKS

Claims 2-10, 12-20 and 22-33 are pending in the present application. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 103, Obviousness

The Examiner rejected Claims 2-10, 12-20 and 22-33 under 35 U.S.C. § 103 as being unpatentable over Neches et al (US004925311) in view of Blumenau (US006018779A). This rejection is respectfully traversed.

As stated by the Federal Circuit, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); *see also Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8, 12 (Fed. Cir. 1983) ("Most, if not all, inventions are combinations and mostly of old elements."). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, *the examiner must show reasons* that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 149 F.3d 1350, 47 USPQ 2d 1453 (Fed. Cir. 1998) (emphasis added). The only reason given by the Examiner for combining the references is stated to be 'to further clarify the Neches invention' (present Office Action, bottom of page 4 and extending to the top of page 5), which is insufficient reasoning per the legal requirements articulated by the Federal Circuit in *In re Rouffet*, Id. Thus, it is urged that the legal requirements have not been met by the Examiner in the current rejection of Claim 2 under 35 USC § 103.

Still further, "[w]hen determining the patentability of a claimed invention which combines two known elements, 'the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *See In re Beattie*, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (quoting *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984)). Applicants

will now show that there was no motivation or suggestion of any desire to combine the teachings of Neches and Blumenau. In addition, even with such improper combination, there are still missing claimed features not taught/suggested by such improper combination, further evidencing non-obviousness of the presently claimed invention.

Specifically with respect to Claim 2, such claim recites features of "encapsulating said first one of said plurality of commands in a first process and encapsulating said second one of said plurality of commands in a second process; beginning processing of said first process; executing said first one of said plurality of commands in response to said beginning processing of said first process, wherein said first one of said plurality of commands executes only while said first process is executing; and beginning processing of said second process only in response to a completion of processing of said first process". In rejecting this aspect of Claim 2, the Examiner acknowledges that the cited Neches reference does not teach such command encapsulation in a process, but states that Blumenau teaches encapsulating a *plurality* of commands within a *single* command and executing them, and that even though Blumenau expressed that the encapsulations of a plurality of commands into a single command, it can be inferred that a single command can also be encapsulated within a command to be executed. Applicants urge that this is classic hindsight analysis, where the Examiner is using Applicants' own patent specification as a blueprint to modify the teachings of the cited references in accordance with the claimed invention. Blumenau expressly states that a *plurality* of commands are encapsulated in a *single* command to reduce processing time, and in particular to reduce processing overhead associated with arbitration that is required when executing a command across a SCSI bus (col. 2, lines 21-31). It makes no sense to infer from the teachings of Blumenau that a single command can also be encapsulated within a command to be executed, as the entire, expressed purpose of Blumenau – to reduce overhead arbitration associated with processing individual commands – would be defeated as only single commands would be sent across the SCSI bus at a time (with their associated arbitration overhead), and in fact this single command encapsulation would itself introduce additional processing (the additional processing being the encapsulation of a single command within a single command) without any associated benefit. Thus, a person of ordinary skill in the art would not have been motivated to modify the teachings of Blumenau in accordance with the features recited in Claim 2. This further evidences that the only motivation to modify the teachings of the cited references in accordance with present invention must be coming from the present invention itself, which is improper hindsight analysis.

Further, the cited Neches reference is keen on *reducing overhead* associated with a multi-processor system (col. 1, lines 10-19; col. 2, lines 41-45; col. 9, lines 54-58), and thus a person of ordinary skill in the art would not have been motivated to modify the Neches teachings to include *additionally processing overhead* that is required to encapsulate a command in a process. Although a device may be capable of being modified to run the way [the patent applicant's] apparatus is claimed,

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there must be a suggestion or motivation *in the reference* to do so. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). There is simply no suggestion or other motivation per the teachings of Neches to modify such teachings to include the claimed command encapsulation technique, due to Neches desire to streamline processing in a multi-processing environment (col. 2, lines 37-53).

Even when improperly combined, there are still missing claimed features not taught or suggested by the cited references, further evidencing non-obviousness of the present invention. Claim 2 expressly recites "executing said first one of said plurality of commands in response to said beginning processing of said first process, wherein said first one of said plurality of commands executes only while said first process is executing". In rejecting this aspect of Claim 2, the Examiner states:

Neches teaches of "the AMP should to Begin Transaction (BT) processing. The message may (and typically does) indicate other processing that should be performed by the AMP after successfully completing Begin Transaction processing" (Neches, col. 8, lines 42-46) and "commences processing the subtask" (Neches, col. 8, line 59). Hence, Neches teaches of executing instructions or commands for the 'current task'.

As can be seen, the Examiner alleges in rejecting this aspect of Claim 2 that Neches "teaches of executing instructions of commands for the 'current task'". However, Claim 2 does not merely recite executing instructions or commands for the current task, but instead recites "executing said first one of said plurality of commands in response to said beginning processing of said first process, wherein said first one of said plurality of commands executes only while said first process is executing". The cited reference does not teach/suggest, nor has the Examiner alleged any such teaching/suggestion of, the claimed step of "executing said first one of said plurality of commands in response to said beginning processing of said first process, wherein said first one of said plurality of commands executes only while said first process is executing". Thus, a *prima facie* case of obviousness has not been established with respect to Claim 2¹, and thus the burden has not shifted to Applicants to rebut the present obviousness assertion². In addition, as a proper *prima facie* case of obviousness has not been established, Claim 2 has been erroneously rejected³.

¹ To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. See also, *In re Royka*, 490 F.2d 580 (C.C.P.A. 1974).

² In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.*

³ If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

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Importantly, the present invention is specifically directed to a method for scheduling the execution of a plurality of commands. Neches' scheduling is done by distributing task steps according to a hashing algorithm (col. 4, lines 27-34; FIG 5A "Step 1 Hashed To 1st AMP Using DSW and Flag in Data", "Step 2 Hashed To 2nd AMP Using DSW and Flag in Data"), and such hashing dispatch with its associated fast dispatch speed would not be possible if these tasks or steps were somehow encapsulated in a process. This further evidences the fact that there would have been no motivation to modify the teachings of Neches in accordance with the specific features recited in Claim 2. The fact that a prior art device could be modified so as to produce the claimed device is not a basis for an obviousness rejection unless the prior art suggested the desirability of such a modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). There is certainly no desire by Neches for any such modification (to provide command encapsulation in a process), as such a modification would adversely affect system performance which Neches is keen on preventing. Thus, Claim 2 is further shown to not be obvious in view of the cited references.

Still further with respect to missing claimed features, Claim 2 expressly recites the claimed feature of "encapsulating said first one of said plurality of commands *in a first process* and encapsulating said second one of said plurality of commands *in a second process*" (emphasis added). As can be seen, a first command is encapsulated in a first process and a second command is encapsulated in a second process. The cited Blumenau reference, which is being used as teaching this claimed feature, teaches that a plurality of commands are encapsulated into a single *command* (see, e.g., Blumenau's Abstract). Claim 2 is specifically directed to encapsulating a single command in a *process*. A teaching of encapsulating multiple commands into a single command does not teach or otherwise suggest encapsulating anything into a process, as expressly recited in Claim 2. Because Claim 2 recites both a command and a process, they are not the same thing and therefore it is error to equate Blumenau's *command* with the claimed *process*. Thus, even when the references have been improperly combined, there are still further missing claimed features not taught or suggested by the cited references.

Applicants initially traverse the rejection of Claim 3-10 for reasons given above with respect to Claim 2 (of which Claims 3-10 depend upon).

Further with respect to Claim 6 (and dependent Claim 7), it is urged that none of the cited references teach or suggest the claimed feature of "wherein said step of determining whether said first process is currently executing further comprises the steps of establishing a return code variable for the first process; and utilizing said return code variable to indicate whether said first process is currently executing". In rejecting this claim, the Examiner cites Neches' teachings at col. 3, line 36 – col. 4, line 40 and col. 8, line 36 – col. 9, line 21, and col. 9, lines 46-58. Applicants urge that these passages describe an ability for a given AMP processor to determine whether it is the last processor in a group using a status word (col. 9, lines 10-18). Status information regarding group membership or lack of

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group membership does not convey any information as to whether or not a particular process is currently executing. For example, a given group of processors could be concurrently executing multiple tasks, and a given processor can be a member of multiple groups at the same time (col. 3, lines 36-51), so group membership status does not directly correlate to process status for a given process. Thus, a status word indicating whether a processor is part of a group does not convey any specific status information with respect to a specific process, as required by Claim 6.

The Examiner also cited Blumenau's teaching at col. 1, line 41- col. 2, line 34 as teaching the features recited in Claim 6. Applicants urge that this cited passage describes the encapsulating of a plurality of commands into a single command which is transmitted over a SCSI bus. The only type of status information described in this passage is an 'id' in a received command which indicates that such received command is an overloaded command containing a plurality of commands (col. 2, lines 5-11). Such command identifier does not provide any type of status information as to whether a given process is currently executing, and thus this cited passage does not overcome the teaching deficiencies identified above with respect to Claim 6 and the cited Neches reference.

Thus, Claim 6 (and dependent Claims 7-10) is further shown to not be obvious in view of the cited references, as there are additional claimed features not taught or suggested by the cited references.

Further with respect to Claim 7 (and dependent Claims 8-10), it is urged that none of the cited references teach or suggest the claimed feature of "utilizing said first process identifier to determine whether said first process is currently executing". In rejecting Claim 7, the Examiner cites the identical passages as were used in rejecting Claim 6. As described above, the cited Neches passages describe bits in a status work that describe whether a given hardware processor is part of a group, and does not teach or otherwise describe using any type of process identifier that is assigned to a first process to determine whether such first process is currently executing. The cited Blumenau passage teaches an identifier that identifies a *type* of command, and not the current executing status of any type of process. Thus, Claim 7 (and dependent Claims 8-10) is further shown to not be obvious in view of the cited references, as there are additional claimed features not taught or suggested by the cited references.

Further with respect to Claim 8 (and dependent Claims 9 and 10), it is urged that none of the cited references teach or suggest searching a process table for a process identifier. In rejecting Claim 8, the Examiner cites Neches' teachings at col. 3, line 36 – col. 4, line 40 and col. 8, line 36 – col. 9, line 21, col. 9, lines 46-58; and Blumenau's teaching at col. 1, line 41- col. 2, line 34. None of the passages cited in rejecting Claim 8 describe any use of a process table, either as claimed or otherwise. Thus, Claim 8 (and dependent Claims 9 and 10) is further shown to not be obvious in view of the cited references, as there are additional claimed features not taught or suggested by the cited references.

Further with respect to Claim 10, it is urged that none of the cited references teach or suggest searching a process table for a process identifier. In rejecting Claim 10, the Examiner cites Neches'

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teachings at col. 3, line 36 – col. 4, line 40 and col. 8, line 36 – col. 9, line 21, col. 9, lines 46-58; and Blumenau's teaching at col. 1, line 41- col. 2, line 34. None of the passages cited in rejecting Claim 10 describe any use of a timer, either as claimed or otherwise. Thus, Claim 10 is further shown to not be obvious in view of the cited references, as there are additional claimed features not taught or suggested by the cited references.

Applicants initially traverse the rejection of Claim 12-20 and 22-33 for similar reasons to those given above with respect to Claim 2.

Applicants further traverse the rejection of Claims 16 (and dependent Claims 17-20) and 26 (and dependent Claims 27-30) for similar reasons to the further reasons given above with respect to Claim 6.

Applicants further traverse the rejection of Claims 17 (and dependent Claims 18-20) and 27 (and dependent Claims 28-30) for similar reasons to the further reasons given above with respect to Claim 7.

Applicants further traverse the rejection of Claims 18 (and dependent Claims 19 and 20) and 28 (and dependent Claims 29 and 30) for similar reasons to the further reasons given above with respect to Claim 8.

Applicants further traverse the rejection of Claims 20 and 30 for similar reasons to the further reasons given above with respect to Claim 10.

Further with respect to Claim 31 (and similarly for Claims 32 and 33), it is urged that none of the cited references teach or suggest the claimed feature of "wherein said first process and said second process are included in a script". In rejecting Claim 31, the Examiner cites Neches' teachings at col. 3, line 36 – col. 4, line 40 and col. 8, line 36 – col. 9, line 21, and col. 9, lines 46-58. Applicants have reviewed these passages extensively, and there is no mention of any type of script. The Examiner also cited Blumenau's teaching at col. 1, line 41- col. 2, line 34 as teaching the features recited in Claim 1. Applicants have reviewed these passages extensively, and there is no mention of any type of script. Thus, Claims 31-33 are further shown to not be obvious in view of the cited references, as there are additional claimed features not taught or suggested by the cited references.

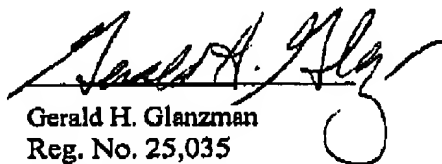
Therefore, the rejection of Claims 2-10, 12-20 and 22-33 under 35 U.S.C. § 103 has been overcome.

BEST AVAILABLE COPY**II. Conclusion**

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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